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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,251	11/20/2001	Wilhelmus Hendrikus Alfonsus Bruls	PHNL 000655	9628

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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EXAMINER

RAO, ANAND SHASHIKANT

ART UNIT PAPER NUMBER

2621

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/989,251	<b>Applicant(s)</b> BRULS ET AL.	
	<b>Examiner</b> Andy S. Rao	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to the Arguments contained in the Amendment***

1. As the Applicant's instructions filed on 6/29/06, previously pending claims 1-10 have been canceled, and claims 11-20 have been added.
2. Applicant's arguments filed with respect to newly added claims 11-20 have been fully considered but they are not persuasive.
3. The Applicants present four collective arguments with one directed towards the currently pending claims based on their "scope" and three arguments contending the Examiner's reliance on the Faroudja and Astle references applied to previously pending claims, said arguments now being put forth in support of newly added claims 11-20. However, after reviewing the references of record and the prosecution history of the application, the Examiner must respectfully disagree for the reasons that follow, and maintain the references as the basis for the grounds of rejection that follows.

Firstly, the Applicants argue that the scope of the newly added claims 11-20, relative to the originally filed claims is unchanged (Amendment of 6/29/06: page 6, lines 7-15). The Examiner disagrees. The newly added claims indeed have changed the scope invention. Going to a claim listing of initially presented claims as filed on 11/20/2001, independent claim 1 recites "...post-processing..." which is not present in newly presented claim 11, and claim 11 mentions a "...frame rate that is less than the original frame..." limitation which fails to appear anywhere in the originally filed claims 1-10. Accordingly, the Examiner maintains that whether intentionally or unintentionally, the Applicants have changed the scope of the invention with the introduction of the newly added claims 11-20 and have not presented claims that are

commensurate with scope of the invention as put forth in the originally presented claims. As such the changed scope of the invention dictates that this is sufficient basis for a final rejection.

After summarizing the salient limitations of the currently pending claims (Amendment of 6/29/06: page 7, lines 12-25), and summarizing the previous Faroudja reference (Amendment of 6/29/06: page 6, lines 14-20; page 8, lines 3-11), the Applicant argues that Faroudja fails to disclose spatial enhancement prior to the implementation of the temporal up-conversion. The Examiner strongly disagrees. It is noted that in figure 15, Faroudja discloses that the video line multiplier processing occurs prior the frame multiplier processing (Faroudja: column 12, lines 30-50). The video line multiplier is the spatial enhancement processing and the frame multiplier represents temporal up conversion to the encoded signals original frame which is executed after the video line multiplier (Faroudja: column 13, lines 55-65). Accordingly, the Examiner maintains the limitation is met. Furthermore even if the temporal up-conversion occurred prior to the spatial enhancement, the Examiner further notes that the courts have ruled that such a distinction would be obvious, as all that represents is a shift in a location of parts that does not change the overall processing for decoding the video signal, *In re Japikse*, 86 USPQ 70 (CCPA 1950). Accordingly, the Examiner further maintains that Faroudja remains an applicable reference.

It is further noted that the applicants argue that since the Faroudja discloses the implementation on spatial enhancement and temporal up-conversion on a fully decoded signal, the claims distinguish over the reference (Amendment of 6/29/06: page 8, lines 1-5). The Examiner respectfully disagrees. It is noted that the presented claims (Claim 11, lines 3-4) also implement spatial enhancement and temporal enhancement on "...a decoded video signal..."

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which the Examiner maintains would be the same fully decoded signal as input into the Faroudja reference, and thus the claims have been read as such. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., decoded signal as in the claims is not a fully decoded video signal) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As such the Examiner maintains that Faroudja reads on the claims

Lastly, the Applicants argue that Astle fails to fails to disclose spatial enhancement prior to the implementation of the temporal up-conversion (Amendment of 6/29/06: page 8, lines 14-21). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

A detailed rejection follows.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 11-13 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Faroudja.

Faroudja teaches a method for decompressing a compressed encoded video (Faroudja: column 14, lines 40-65) having an original frame rate (Faroudja: column 9, lines 40-65), the method comprising: decoding the compressed encoded video signal to obtain a decoded video signal (Faroudja: column 5, lines 27-46), having a frame rate that is less than an original frame rate (Faroudja: column 6, lines 10-50); spatially enhancing the decoded video signal to provided a spatially enhanced signal (Faroudja: column 12, lines 33-37; figure 15); and applying a temporal upconversion to the spatially enhanced video signal to provided a decompressed video signal at the original frame rate (Faroudja: column 13, lines 45-65), as in claim 11.

Regarding claim 12-13, Faroudja discloses applying a vertical upconversion to the decoded video signal prior to spatially enhancing the decoded video signal (Faroudja: column 12, lines 44-46; figure 15), and applying a horizontal spatial up conversion to the spatially enhanced signal (Faroudja: column 10, lines 20-42), as in the claims.

Faroudja discloses a decoder (Faroudja: figure 15) for decompressing a compressed encoded video (Faroudja: column 14, lines 40-65) having an original frame rate (Faroudja: column 9, lines 40-65), the method comprising: a decoder that is configured to decode the compressed encoded video signal to obtain a decoded video signal (Faroudja: column 5, lines 27-46), having a frame rate that is less than an original frame rate (Faroudja: column 6, lines 10-50); a spatial enhancer that is configured to spatially enhance the decoded video signal to provided a spatially enhanced signal (Faroudja: column 12, lines 33-37; figure 15); a temporal up-converter that is configured to temporally upconvert to the spatially enhanced video signal to provided a

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decompressed video signal at the original frame rate (Faroudja: column 13, lines 45-65), as in claim 17.

Regarding claims 18-19, Faroudja discloses a spatial up-converter that is configured to provide vertical upconversion to the decoded video signal prior to spatially enhancing the decoded video signal (Faroudja: column 12, lines 44-46; figure 15), and the decoder includes a horizontal spatial up-converted that is configured to provide horizontal spatial up conversion to the spatially enhanced signal (Faroudja: column 10, lines 20-42), as in the claims.

Regarding claim 20, Faroudja discloses a video recording or reproduction device (Faroudja: column 9, lines 25-35) comprising a decoder (Faroudja: column 8, lines 25-60), as in the claim.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faroudja in view of Astle.

Faroudja teaches a method for decompressing a compressed encoded video (Faroudja: column 14, lines 40-65) having an original frame rate (Faroudja: column 9, lines 40-65), the method comprising: decoding the compressed encoded video signal to obtain a decoded video

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signal (Faroudja: column 5, lines 27-46), having a frame rate that is less than an original frame rate (Faroudja: column 6, lines 10-50); spatially enhancing the decoded video signal to provided a spatially enhanced signal (Faroudja: column 12, lines 33-37; figure 15); and applying a temporal upconversion to the spatially enhanced video signal to provided a decompressed video signal at the original frame rate (Faroudja: column 13, lines 45-65), as in claims 14-16. Although Faroudja fails to specifically teach the use of edge enhancement that is carried out by peak filtering by a spread of pixel values, Astle does (Astle: column 22, lines 35-40). Astle discloses a form of edge enhancement to preserve the true edges of the images for additional clarity (Astle: column 23, lines 15-25). It would have been obvious for one of ordinary skill in the art to incorporate the edge enhancement into the Faroudja method in order to preserve true edges of the decoded images for additional clarity. The Faroudja method, now incorporating the Astle edge enhancement, has all of the features of claims 14-16.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37



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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Demos discloses temporal and resolution layering in advanced television. Robinson discloses a method and apparatus for image translation with improved motion compensation.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andy S. Rao  
Primary Examiner  
Art Unit 2621

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PRIMARY EXAMINER



asr  
September 12, 2006